

Specification for seal coats on cement mortar lined ductile iron pipes and fittings

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee PSE/10, Iron pipes and fittings, upon which the following bodies were represented:

- Adhesive Tape Manufacturers' Association
- British Compressed Gases Association
- British Foundry Association
- Ductile Iron Pipe Committee
- Institute of British Foundrymen
- Institution of Mechanical Engineers
- Society of British Water Industries

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Foreword

This British Standard has been prepared by Technical Committee PSE/10, Iron pipes and fittings and is a revision of BS 7892:1997 which is withdrawn.

WARNING This specification calls for the use of substances and/or procedures that may be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

Product certification

Users of this British Standard are advised to consider the desirability of third-party certification of product conformity with this British Standard based on testing and continuing surveillance, which may be coupled with assessment of a supplier's quality systems against the appropriate part of BS EN ISO 9000.

Enquiries as to the availability of third-party certification schemes will be forwarded by BSI to the Association of Certification Bodies. If a third-party certification scheme does not already exist, users should consider approaching an appropriate body from the list of association members.

Annexes A to F are normative.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations. Attention is drawn to the following statutory regulations.

- Water Supply (Water Quality) Regulations 1989 as amended by the Water Supply (Water Quality) (Amendment) Regulations 1991 [1] (in particular Regulation 25).
- The Water Supply (Water Quality) (Scotland) Regulations 1990 [2] (in particular Regulation 25).

Summary of pages

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Introduction

The intended purpose of the seal coat is to control leaching of lime (CaOH_2) and other hydroxides from the cement into the water supply such that the pH of conveyed water is maintained below 9.5 during normal use. A pH of 9.5 is the maximum prescribed value permitted by the Water Supply (Water Quality) Regulations 1989 as amended by the Water Supply (Water Quality) (Amendment) Regulations 1991 [1] and the Water Supply (Water Quality) (Scotland) Regulations 1990 [2]. The seal coat is also intended to control leaching of other deleterious materials which could cause their maximum permitted concentration or value to be exceeded.

Attention is drawn to the fact that National or International Water Supply or Water Quality Regulations, effective within the region, may apply when seal coated surfaces come into contact with, or are likely to come into contact with, potable water, when used:

- a) in accordance with the product manufacturer's instructions for use; and
- b) under any other appropriate conditions defined for that product within any published list of substances, products and processes approved to those Water Supply or Water Quality Regulations.

Seal coatings are usually specified where the pipeline is to convey soft water, and/or where water residence times are very long. Supply water quality data for such pipelines should be discussed between the prospective client and the manufacturer of the product so as to ensure the suitability of the product for use.

1 Scope

This British Standard is issued to satisfy the requirements of both users and suppliers for a standard specification for seal coats on cement mortar linings in ductile iron pipes and fittings. It specifies requirements for seal coatings for factory application to the surface of cement mortar linings which are factory applied to the interior of ductile iron pipes and fittings.

This standard is applicable to products for potable and other water applications.

This standard gives requirements for routine testing for visual appearance, coating thickness, adhesion and odour; it also gives type test requirements for water quality effects (pH), durability, and abrasion resistance.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS 3887:1991, *Specification for pressure sensitive adhesive closing and sealing tapes*.

BS 3900-C.5:1997, *Methods of test for paints — Group C: Tests associated with paint film formation — Part C5: Determination of film thickness*.

BS 6068-2.50:1995, *Water quality — Part 2: Physical, chemical and biochemical methods — Section 2.50: Determination of pH*.

3 Terms and definitions

For the purposes of this British Standard the following terms and definitions apply:

3.1

ductile iron

cast iron in which graphite is present substantially in spheroidal form

3.2

fitting

casting other than a pipe which allows pipeline deviation or change of direction or bore

NOTE Flanged-socket pieces, flanged-spigot pieces and collars are classified as fittings.

3.3

test film

film of consistent thickness and density, morphologically stable at the temperature of the substrate during seal coat application, used as a surrogate surface for the measurement of coating thicknesses

3.4

pipe

casting of uniform bore, straight in axis, having either spigot, socket, flange or plain ends

NOTE This does not include flanged socket pieces, flanged spigot pieces and collars, which are classified as fittings.